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NEW METHODS FOR PRODUCING CARBON BLACK, RUBBER GOODS, FERTILIZERS, VITAMINS

NEW PLANT PRODUCES CARBON BLACK BY NEW METHOD -- Moscow, Ogonek, No 8, Feb 52

Carbon black, which is irreplaceable in the rubber industry, increases the durability of natural rubber two times and of synthetic rubber, ten times. Every automobile tire casing has a carbon black content of 30-40 percent.

Carbon black has varied applications. It is used in India ink, printers' ink, lacquers, and many types of plastics.

As the rubber industry developed it became necessary in the last few years to increase sharply the production of carbon black. However, the production method was very primitive. Natural gas was ignited in thousands of small burners. When they smoked, the carbon black settled down in special sheds, and was removed with scrapers and put into a bin.

This method of production permitted only an insignificant part of the gas to be converted into carbon black. Carbon black is obtained when gas burns in a free supply of air, with a quiet, smalling flame, like a candle, Hence, by the old method, a great deal of the carbon was fully consumed and volatilized. Much of the heat required for decomposition of the gas was carried off, not to mention one third of the carbon black produced. Only 16-20 grams of carbon black were obtained from one cubic meter of gas.

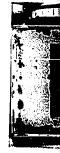
A new method of obtaining carbon black was worked out under the direction of V. S. Yeremenko by engineers of the Ministry of Petroleum Industry USSR, who were awarded a Stalin Prize. Several large furnaces were installed in a new plant. They are filled, at one stroke, with a mass of gas, and a small quantity of air is piped to them under pressure. Part of the gas is consumed, and part is decomposed, forming carbon black. The combustion process is regulated. New 90 grams of carbon black are obtained from every cubic meter of gas, four to five times as much as by the old method.

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This carbon black is distinguished by a valuable new quality: it does not become heated easily. It is known that heat is not good for rubber. When an automobile is operated at high speeds, and the tires become very hot, especially in sumer, the new carbon black prevents the rubber from premature car, and increases the period of service of tire casings one and a half times. This is tantamount to the supplementary production of millions of tire casings.

LENINGRAD ENTERPRISES DEVELOP NEW TECHNIQUES -- Leningradskaya Pravda, 10 Apr 52

The plants of the rubber industry in Leningrad have developed new production technology during the last 3 years. The Krasnyy Treugol'nik Plant has worked out and introduced into production a completely new mechanized method of producing overshoes by stamping. Thirty percent of the overshoes put out are produced by this method.

The Leningrad Industrial Rubber Products Plant has worked out and put into practice a method of die-casting rubber. This project was headed by Stalin Prize winner Koropal'tsev. The plant organized by this method the production of large items capable of working at high speeds and under heavy loads. It has mastered the production of more than 300 new rubber, rubber and metal, and ebonite products, and is making important items for the great construction projects, particularly highly durable forcing and suction hose up to one meter in diameter.

The Leningrad Tire Plant has basically changed its technology for the production of tires. The production of automobile inner tubes has been almost completely automatized and mechanized.

The success of the Leningrad plants of the rubber industry is due largely to their close collaboration with scientists. During the past 3 years, the All-Union Scientific Research Institute of Synthetic Rubber imeni Academician Lebedev has made great contributions to industry.

The production of plastics is comparatively new, but plastics are replacing expensive metals and other materials successfully, and are basically changing the technology of production.

Many new types of production, perfected at the Leningrad Okhtinskiy Chemical Combine, are characterized by original technology, and serve as a prototype for similar production at other enterprises. The combine is regularly being assisted by about 15 scientific research institutes and chairs of institutes of higher education.

The Leningrad Nevskiy Chemical Plant has made a significant improvement in the production of superphosphate. Its 1951 production of superphosphate exceeded the 1940 output by 40 percent.

There are still many tasks facing the chemical industry, chief of which are expansion of raw materials bases, efficient utilization of waste, automatization of technological processes, the development of new highly productive chemical machines and apparatus, and the equipment of plants, particularly plants of the rubber industry, with constant-flow production lines. -- P. Romankov, professor, Technological Institute imeni Lensovet

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- 2 -

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IMPROVE TIRE CASINGS FOR ZIS-110 SPORT MODELS -- Moscow, Moskovskaya Pravda, 22 Apr 52

The Moscow Tire Plant has achieved good results with its improved automobile tire casings for ZIS-110 sport cars. Consumption of materials for this product is being reduced, and the period of service of the tire casings is being increased one and a half times.

CONIFER NEEDLES SOURCE OF VITAMINS, BALSAM, CHLOROPHYLL -- Moscow, Znaniye-Sila, Sep 51

During the siege of Leningrad, F. T. Solodkiy, senior scientific associate, Leningrad Forestry Engineering Academy imeni S. M. Kirov, began to do research on conifer needles, a waste product of the timber industry.

About 9 million tons of conifer branches are burned in the forests every year. Careful analyses carried on by Solodkiy have shown it possible to obtain at least 150 tons of vitam'. A (carotin) and 4,000 tons of vitamin C from this quantity of conifer needle. The production of conifer tinctures was started in his laboratory, and thousands of Leningradites had a cheap and effective antiscorbutic remedy. The vitamin A preparations made in the laboratory assisted in the treatment of wounded soldiers in the hospitals.

Continuing his research, Solodkiy established that not only vitamins A and C, but other valuable products as well could be obtained from conifer needles. They contain balsamic substances, phytocides, and a great deal of chlorophyll. A conifer-carotin salve and a chlorophyll preparation made in the laboratory are being used successfully in Leningrad hospitals.

After the war, a preparation called chlorophyll-carotin conifer salve was developed, which is being used successfully in the treatment of burns, frost-bite, and certain skin diseases.

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